

-12-

REMARKS

In response to the Office Action mailed March 8, 2006, Applicants respectfully request reconsideration. To further the prosecution of this Application, Applicants submit the following remarks, and have added new claims. The claims as now presented are believed to be in allowable condition.

Claims 1-18 were pending in this Application. By this Amendment, claims 19-28 have been added. Accordingly, claims 1-28 are now pending in this Application. Claims 1, 2, 10 and 18 are independent claims.

Allowed Claims

Claims 6, 7, 14 and 15 were objected to as being dependent on a rejected base claim but were deemed allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. The Applicants reserve the right to amend the claims as described above until the Applicants receive a reply to the Applicants' request for reconsideration of other claims in the Application.

Rejections under §102 and §103

Claims 1,2,4,8-10, 12, 16 and 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,411,526 (Nguyen et al.) in view of U.S. Patent No. 5,842,030 (Larabell et al.). Claims 3, 5, 11 and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Nguyen et al.) in view of Larabell et al. and further in view of U.S. Patent No. 5,366,388 (Freeman et al.).

Applicants respectfully traverse each of these rejections and request reconsideration. The claims are in allowable condition because they patentably distinguish over the cited references.

Nguyen discloses a power cord set 100 including an elongated body 105 (column 3, lines 44-47 and Figs. 1A, 1B, 2A and 2B). Located about the elongated body 105 of the integrated coupling device 100 is a flange 150 (column 3, lines 53-57). The elongated body 105 is generally composed of a

plastic material such as a polycarbonite or polyamide nylon (column 3, lines 61-62). This is advantageous because it permits the power cord set 100 to be molded with any or all of the various structural embodiments of the invention molded therein (column 3, lines 63-65). Also shown are a plurality of mounting holes (one of which is designated 170) through the flange 150 (column 4, lines 23-24). This mounting hole 170 is configured to receive a fastener, such as a screw, bolt or clip, that is inserted through the mounting hole 170 and a corresponding hole on the panel to fasten the cord set 100 to the panel (column 4, lines 24-28). A panel (e.g., backplane) includes a plurality of self-aligned, panel-mounted cord sets (one of which is designated 310) coupled to the panel 300 through a corresponding plurality of apertures 320 (column 4, lines 53-60 and Figs. 3A and 3B). The self-aligned, panel-mounted power cord set 310 has a power cord 330, a module connector 340 and a flange 350 about an elongated body 360 (column 4, lines 59-63). Located on the flange 350 are a plurality of alignment posts 355 and on the panel are a plurality of corresponding alignment post receptacles 356 configured to receive the alignment posts 355 and self-align the elongated body 360 in the aperture 320 with respect to the panel 300 (column 4, line 64 through column 5, line 2).

Larabell discloses a power supply subsystem for use in a system such as a memory storage system (Abstract). Such a system is shown in Fig. 1 of Larabell.

Freeman discloses a wall panel 10 (column 8, lines 54-57 and Fig. 1). Freeman further discloses a crimp modular jack 12 for terminating building wiring 13, a crimp modular plug 14 for terminating building wiring 15, a modular coupler 16 and a modular plug 18 for terminating a flat cable 20 (column 8, lines 57-62). When the crimp modular jack 12 which is inserted within a receiving aperture 22F, a seating tab 30 engages a lower engagement track 28F and an interlocking tab 32 engages an upper engagement track 26F (column 9, lines 7-11 and Fig. 1).

Claims 10-17

Claim 10 is directed to a device for fastening a plug of a power cord to a frame which is configured to support a power supply. The device has a body configured to attach to an installation location of the frame and substantially hold the plug at the installation location of the frame when the power supply connects with and disconnects from the plug. The body includes a first end wall, a second end wall, and lateral walls which connect the first end wall and the second end wall together. When the body substantially holds the plug at the installation location of the frame and when the body is attached to the installation location of the frame, (i) the first end wall is configured to restrain the plug in a positive Z-direction relative to the frame, (ii) the second end wall is configured to restrain the plug in a negative Z-direction relative to the frame, the negative Z-direction being opposite to the positive Z-direction along a Z-axis, and (iii) the lateral walls are configured to register the plug relative to the frame in an X-Y plane which is perpendicular to the Z-axis.

The cited references do not teach or suggest, either alone or in combination, a device having a body which includes a first end wall, a second end wall, and lateral walls which connect the first end wall and the second end wall together, as recited in claim 10. Specifically, the cited references do not disclose a body having a first end wall configured to restrain a plug in a positive Z-direction relative to a frame, (ii) a second end wall configured to restrain the plug in a negative Z-direction relative to the frame, the negative Z-direction being opposite to the positive Z-direction along a Z-axis, and (iii) lateral walls configured to register the plug relative to the frame in an X-Y plane which is perpendicular to the Z-axis. Rather, Nguyen discloses a cord set 100 having an elongated body 105 molded with a flange 150 (e.g., see column 3, lines 44-62 and Figs. 1A, 1B, 2A and 2B of Nguyen). Fasteners (a screw, bolt or clip) insert through mounting holes 170 of the flange 150 and corresponding holes on a panel 300 to fasten the cord set 100 to the panel (e.g., see column 4, lines 24-28 of Nguyen).

As the basis of the rejection, the Office Action contends that Nguyen discloses “a first end wall (see, first end wall of 360)), a second end wall (see, second end wall 360)), and lateral walls (see, lateral wall of 360) which connect the first end wall and the second end wall together” (see the last paragraph of page 2 of the Office Action). Applicants respectfully submit that the item 360 in Nguyen is the elongated body 360 (see column 4, lines 59-63 and Figs. 3A and 3B of Nguyen) and, as such, does not have (i) a first end wall configured to restrain a plug in a positive Z-direction relative to a frame, and (ii) a second end wall configured to restrain the plug in a negative Z-direction relative to the frame, as recited in claim 10. In contrast to end walls recited in claim 10, Nguyen uses a flange 350 to mount to a panel 300 (see column 4, line 64 through column 5, line 2 of Nguyen). As clearly visible in Figs. 3A and 3B of Nguyen, there are no end walls or lateral walls to this flange 350, and the Office Action has inadvertently and incorrectly characterized portions of the elongated body 360 in Nguyen as end walls configured to restrain a plug relative to a frame.

Moreover, it is unclear how or why one would want to modify the Nguyen cord set to have first and second end walls (connected together by lateral walls) configured to restrain a plug relative to a frame (as recited in claim 10) since the Nguyen cord set uses a flange and fasteners for fastening the cord set to a panel. Larabell, which discloses a power supply subsystem, does not teach or suggest how or why one would want to make such a modification to the Nguyen cord set.

For the reasons stated above, claim 10 patentably distinguishes over the cited references. Accordingly, the rejection of claim 10 under 35 U.S.C. §103(a) should be withdrawn and claim 10 is in allowable condition.

Because claims 11-17 depend from and further limit claim 10, claims 11-17 are in allowable condition for at least the same reasons.

Additionally, it should be understood that the dependent claims recite additional features which further patentably distinguish over the cited prior art.

For example, claim 11 recites tabs extending from the lateral walls, the tabs being configured to deflect toward the lateral walls and bend back away from the lateral walls when the body inserts through a hole defined by the frame to lock the body to the frame at the installation location. The last line on page 5 of the Office Action states that Nguyen is silent to tabs. Applicants agree. However, the the second paragraph on page 6 of the Office Action contends that it would be obvious to utilize tabs shown in Freeman on the Nguyen cord set in order to secure a plug to a frame. Applicants respectfully disagree. It would not be obvious since the Nguyen cord set already employs fasteners through the flange 350 to secure the elongated body 360 to the panel 300, and since the tabs of Freeman would clearly interfere with the flange 350 (i.e., no way for the Freeman tabs to deflect or back away). Accordingly, there are additional distinguishing limitations.

Claim 1

Claim 1 is directed to a data storage system having, among other things, a device configured to fasten a first plug to a frame. The device includes a body configured to attach to an installation location of the frame and substantially hold the first plug at the installation location of the frame when a power supply connects with and disconnects from the plug. The body includes a first end wall, a second end wall, and lateral walls which connect the first end wall and the second end wall together. When the body substantially holds the first plug at the installation location of the frame and when the body is attached to the installation location of the frame, (i) the first end wall is configured to restrain the plug in a positive Z-direction relative to the frame, (ii) the second end wall is configured to restrain the first plug in a negative Z-direction relative to the frame, the negative Z-direction being opposite to the positive Z-direction along a Z-axis, and (iii) the lateral walls are configured to register the first plug relative to the frame in an X-Y plane which is perpendicular to the Z-axis.

As mentioned above in connection with claim 10, the cited references do not teach or suggest, either alone or in combination, such a device. Therefore, the cited references do not teach or suggest a system having such a device, as recited in claim 1. Thus, claim 1 patentably distinguishes over the cited references for similar reasons as set forth in connection with claim 10. Accordingly, the rejection of claim 1 under 35 U.S.C. §103(a) should be withdrawn and claim 1 is in allowable condition.

Claims 2-9

Claim 2 is directed to a power cord assembly having, among other things, a device for fastening the first plug to a frame which is configured to support the power supply. The device includes a body configured to attach to an installation location of the frame and substantially hold the first plug at the installation location of the frame when the power supply connects with and disconnects from the plug. The body includes a first end wall, a second end wall, and lateral walls which connect the first end wall and the second end wall together. When the body substantially holds the first plug at the installation location of the frame and when the body is attached to the installation location of the frame, (i) the first end wall is configured to restrain the plug in a positive Z-direction relative to the frame, (ii) the second end wall is configured to restrain the first plug in a negative Z-direction relative to the frame, the negative Z-direction being opposite to the positive Z-direction along a Z-axis, and (iii) the lateral walls are configured to register the first plug relative to the frame in an X-Y plane which is perpendicular to the Z-axis.

As mentioned above in connection with claim 10, the cited references do not teach or suggest, either alone or in combination, such a device. Thus, the cited references do not teach or suggest a power cord assembly having such a device, as recited in claim 2. As a result, claim 2 patentably distinguishes over the cited references for similar reasons as set forth in connection with claim 10.

-18-

Accordingly, the rejection of claim 2 under 35 U.S.C. §103(a) should be withdrawn and claim 2 is in allowable condition.

Because claims 3-9 depend from and further limit claim 2, claims 3-9 are in allowable condition for at least the same reasons.

Claim 18

Claim 18 is directed to a method for installing a power supply into a data storage system. The method includes fastening a device to a plug of a power cord, and attaching the device to an installation location of a frame of the data storage system. The method further includes inserting a power supply into the frame of the data storage system until the power supply mates with the plug of the power cord. The device has a first end wall, a second end wall, and lateral walls which connect the first end wall and the second end wall together. When the device substantially holds the plug at the installation location of the frame and when the device is attached to the installation location of the frame, (i) the first end wall is configured to restrain the plug in a positive Z-direction relative to the frame, (ii) the second end wall is configured to restrain the first plug in a negative Z-direction relative to the frame, the negative Z-direction being opposite to the positive Z-direction along a Z-axis, and (iii) the lateral walls are configured to register the first plug relative to the frame in an X-Y plane which is perpendicular to the Z-axis.

As mentioned above in connection with claim 10, the cited references do not teach or suggest, either alone or in combination, any use of such a device. Accordingly, the cited references do not teach or suggest a method which involves such a device, as recited in claim 18. Therefore, claim 18 patentably distinguishes over the cited references for similar reasons as set forth in connection with claim 10. Accordingly, the rejection of claim 18 under 35 U.S.C. §103(a) should be withdrawn and claim 18 is in allowable condition.

Newly Added Claims

Claims 19-28 have been added and are believed to be in allowable condition. Claims 19-21 depend from claim 1. Claims 22-23 depend from claim 2. Claims 24-25 depend from claim 10. Claims 26-28 depend from claim 18. Support for claims 19 and 26 is provided within the Specification, for example, on page 9, line 20 through page 10, line 3 and in Figs. 2 and 3. Support for claims 20, 22, 24 and 27 is provided within the Specification, for example, on page 8, line 25 through page 9, line 10 and in Figs. 2 and 3. Support for claims 21, 23, 25 and 28 is provided within the Specification, for example, on page 11, lines 7-23 and in Figs. 5 and 6. No new matter has been added.

Conclusion

In view of the foregoing remarks, this Application should be in condition for allowance. A Notice to this affect is respectfully requested. If the Examiner believes, after this Amendment, that the Application is not in condition for allowance, the Examiner is respectfully requested to call the Applicants' Representative at the number below.

Applicants hereby petition for any extension of time which is required to maintain the pendency of this case. If there is a fee occasioned by this Amendment, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50-3661.

-20-

If the enclosed papers or fees are considered incomplete, the Patent Office is respectfully requested to contact the undersigned collect at (508) 616-2900, in Westborough, Massachusetts.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'David E. Huang', is written over a horizontal line.

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